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# Driving growth and value creation amid high food prices

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# Introduction

Food prices globally are currently at the highest they have been since July 2011. The UN Food and Agriculture Organisation's (FAO) Food Price Index (FPI) shows commodity prices are up over 30% from this time last year, and almost 150% (albeit with volatility) in the last two decades<sup>1</sup>.

High world prices of vegetable oils and cereals are largely responsible for the FPI spike. These are in turn caused by factors connected to the COVID-19 pandemic such as labour shortages, lockdown measures and high shipping costs, as well as climate change and the increased frequency of extreme weather-related events.

These events are causing enormous issues across the food sector. For farmers and food producers this means declining crop yields and higher costs of raw materials, and for consumers, higher food prices and food shortages. Whilst food security has become a growing concern for governments in recent years, the pandemic has highlighted major shortcomings of global supply chains, prompting protectionist policies and accelerated investments in this space.

High food prices also drive more broader socio-economic challenges – the poor are generally the hardest hit, inflation continues to drive prices even higher, and the expectations of citizens on their governments to introduce control measures often leads to increased social and political unrest.

In light of such volatility, businesses across the food industry are being forced to adapt to limit the impact on production, supply and their own financial performance.

However, these challenges also provide an enormous opportunity for businesses to strengthen their core and take advantage of new growth opportunities to alleviate these issues.

Developing new technologies will enable businesses to optimise their operations and mitigate against external headwinds, as well as drive profitable yields and greater food production. With global agri-food-tech investment increasing almost 400% since 2014<sup>2</sup>, investor appetite is likely to remain strong in this space.

Consolidating across the value chain will allow businesses to react quicker to changing market conditions, increasing their visibility and control over both production and consumer demand. For sustainable long-term success, increasing the diversity of products and markets will allow businesses to take advantage of additional avenues of value and hedge against future market disruption. Such challenges can be a huge catalyst for long-term success and value creation.

<sup>1</sup> Food and Agriculture Organisation of the United Nations (2021). FAO Food Price Index.

<sup>2</sup> AgFunder. (2021). 2021 AgFunder AgriFoodTech Investment Report. AgFunder.

# I.

## Food prices reaching an all-time high



### High commodity prices

Global food commodity prices have soared since mid-2020, reaching a record high in October 2021. Vegetable oils and cereals have experienced the greatest growth – primarily due to pandemic-induced labour shortages and extreme weather events impacting harvests and production.

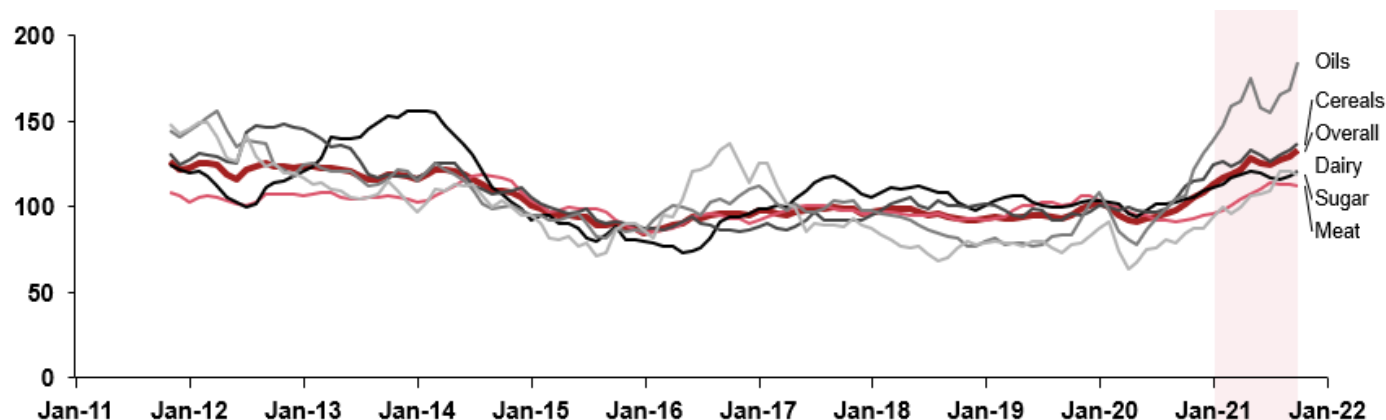
Palm oil prices have more than doubled in the last 18 months<sup>3</sup>, with sustained high demand from China and reduced import duties in India (the largest export market for palm oil) contributing to such increases.

A global shortage of high-quality wheats due to reduced harvests and tighter availability in major export countries including Canada, Russia, and the US, has also placed upward pressure on prices.

Earlier this year, US soybean futures prices reached a 9-year high, largely caused by sustained high demand from China, accounting for over 60% of global soybean trade, and tight supply in Brazil and the US<sup>4</sup>.

### Exhibit 1: Global commodity prices, Food Price Index (Nominal)

Index, monthly, Nov 2011 – Oct 2021



Source: UNFAO

<sup>3</sup> Insider (2021). Palm Oil Commodity. Markets Insider.

<sup>4</sup> Anand, A. (2021). China's record soybean demand forecast to support prices till 2022: sources. S&P Global.



On top of these factors, demand has remained high since the onset of the pandemic as food security worries have seen countries such as China stockpiling reserves. In recent months, demand has increased further as global markets begin to recover and consumer spending resumes.

Cargill's CEO, David MacLennan expects food prices to stay elevated throughout 2022 largely due to the continued shortages in labour markets.

### Supply disruption

Pandemic-induced labour shortages, factory closures and poor harvests have impacted food supplies significantly. In Malaysia, some palm oil plantations are operating with two thirds or less of the required workforce – the lack of labour has resulted in vermin infestations and increased harvesting time, driving lower yields. Malaysia, accounting for a third of global palm oil exports, saw the average yield of palm fruit bunches fall c. 9% to 7.15 tonnes per hectare in the first half of the year from 7.85 during the same period the year prior<sup>5</sup>.

Many factories and mills were forced to close due to COVID-19 working restrictions, further impacting supply. Some essential food production and processing facilities were temporarily shut down during the initial lockdowns in Malaysia due to confusion from local law enforcement.

Climate change issues and extreme weather events are making it increasingly harder to produce food. Droughts and heatwaves in the US and Canada, frost in Brazil, and flooding and torrential rains in Europe this year have heavily impacted crop production across the world.

<sup>5</sup> Chu, M. M., Thukral, N. (2021). Rats, drought and labour shortages eat into global edible oil recovery. Reuters



## Supply chain issues

Stakeholders across the entire food ecosystem have also been negatively affected by high shipping costs and delays resulting from the pandemic.

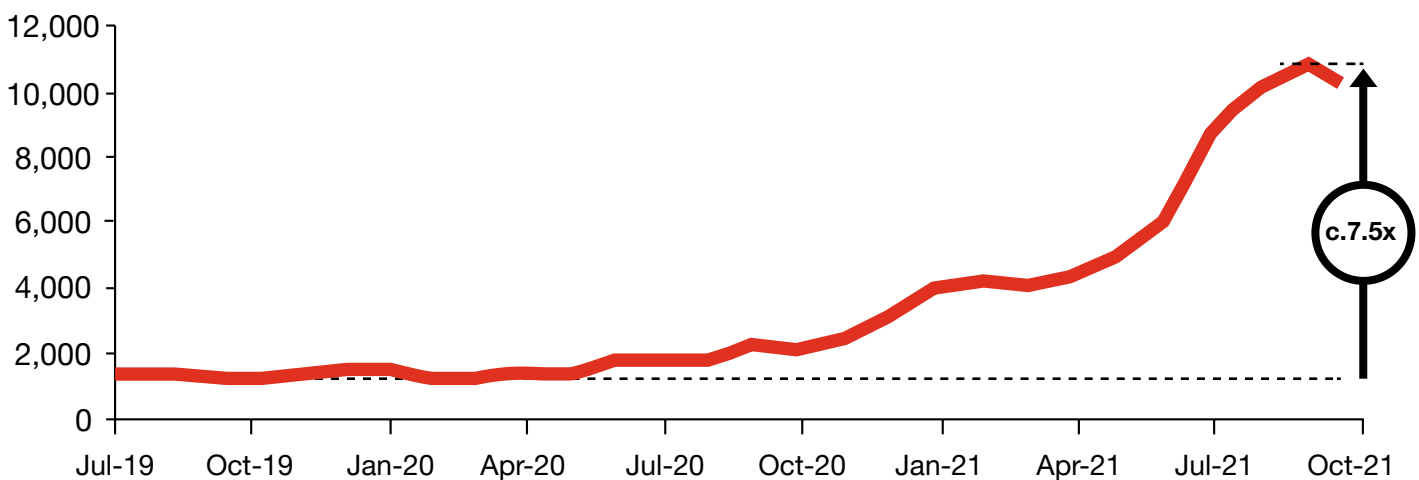
In September 2021, container shipping costs were 7.5 times higher than those of two years ago (Exhibit 2)<sup>6</sup>. A shortage of available shipping

containers as global demand picks up is to blame – with the usual flow disrupted since the first wave of lockdown measures in 2020.

Road transport costs have also increased due to truck driver shortages and higher oil prices in some regions.

### Exhibit 2: Average global container freight rate

USD, Jul 2019 – Oct 2021



Source: Freightos

<sup>6</sup> Freightos



# II.

## Disruption across the food sector

### High food costs

High commodity prices and disruption to supply has inevitably resulted in higher food costs for consumers.

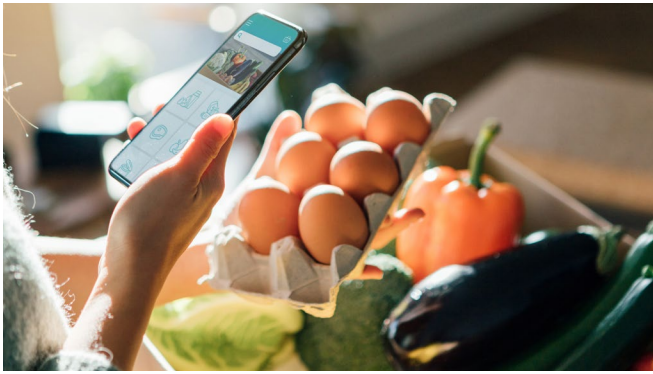
Wet markets around Kuala Lumpur report that the price of chicken has risen by just over 10% per kilogram since late August, with some vegetables increasing by as much as 25-50%. In response to the pandemic, farmers have reduced the variety and volume of crops they cultivate. Similarly, fish farming and livestock production has also dropped.<sup>7</sup>

Several Chinese food companies recently announced price hikes. China's largest vinegar manufacturer, Jiangsu Hengshun, will raise prices of some products 5-15% later this month, with fresh-food producer Haixin Foods increasing retail prices between 3-10%.<sup>8</sup> All have cited the prices of raw materials, with labour and logistics as key drivers.



<sup>7</sup> Dava, E. (2021). Price hikes at the market blamed on pandemic-induced conditions, govt urged to help. The Sun Daily.

<sup>8</sup> Yanran, S., Zou, M. (2021). Caixin. Chinese food giants hike prices as production costs rise. Nikkei Asia.



## Food shortages

News of global food shortages have made headlines in recent months.

In the US, chicken farms were impacted by labour shortages as they struggled with retaining and recruiting employees, causing a slowdown in chicken processing. The supply chain shortage led to KFC limiting advertisements for its chicken tenders<sup>9</sup>.

Severe droughts in California, which grows more than a third of the world's tomatoes used for canned products, caused a sharp decline in production earlier this year. The decline has been exacerbated by labour shortages, making processing costs 7% more expensive than the previous three seasons, as well as a global shortage of steel cans for packaging<sup>10</sup>.

During the 2007-08 food crisis, the sharp increase in global food prices led to 33 countries imposing food export restrictions between 2007 and 2011 to protect their populations from rising domestic prices. Similarly, in the first wave of Covid-19 lockdowns between March and May 2020, 22 countries began imposing export restrictions and reducing food import tariffs to lower domestic food prices<sup>11</sup>. Whilst this aims to protect their domestic market, it further exacerbates the problem globally by creating food shortages and driving prices even higher.

Food security concerns, accelerated by high prices and shortages caused by the pandemic, are increasingly becoming top of mind for governments. Singapore's "30 by 30" goal of domestically producing 30% of the country's nutritional needs by 2030 has been accelerated in the last 18 months, with the government committing over US\$20 million in express grants for farmers to ramp up production of certain food products including eggs, leafy vegetables, and fish<sup>12</sup>.

## Food wastage

The pandemic has exposed additional shortcomings in global supply chains. Many food producers and retailers have encountered difficulties transporting products due to labour shortages, and aviation, port and border disruptions.

In the UK, one of hundreds of dairy farmers was forced to dump 40,000 litres of milk between August and September this year due to a nationwide lorry driver shortage<sup>13</sup>.

Whilst the impact of the pandemic on supply chains has drawn attention to this issue, food wastage is not a new problem. Indonesia is responsible for approximately 25-50 million metric tons of food loss and waste every year, caused by inefficiencies at each stage of the value chain spanning processing, transportation, storage, and selling<sup>14</sup>.

<sup>9</sup> Hanbury, M. (2021). KFC isn't advertising chicken tenders on TV because of supply chain shortages. Insider.

<sup>10</sup> Reiley, L. (2021). Get ready to pay more for tomatoes, as California growers reel from extreme weather. The Washington Post.

<sup>11</sup> Mogue, T. (2020). Food markets during COVID-19. International Monetary Fund.

<sup>12</sup> Singapore Food Agency. (2020). Levelling up Singapore's food supply resilience.

<sup>13</sup> Sky News. (2021). Dairy farmers forced to pour tens of thousands of litres of milk away due to HGV driver shortage and rising costs and labour shortages. Sky News.

<sup>14</sup> Jakarta Globe. (2021). Foods thrown away in Indonesia are enough to solve its malnourishment problem. Jakarta Globe.





# III.

## These issues are driving other global challenges



### The poor are generally hit the hardest

Lower income households and poorer countries will be most impacted by rising food prices due to their inability to absorb such increases. FAO economist, Josef Schmidhuber, notes that people in low-income countries spend a significant proportion of their income – often more than 60% – on food<sup>15</sup>.

COVID-19 has reversed progress made in reducing hunger and malnutrition in low-income developing countries. ADB suggests 75-80 million people in developing Asia have been pushed into extreme poverty since the pandemic began<sup>16</sup>.

Globally, the World Food Programme estimates people in chronic hunger have increased from almost 770 million in 2020, to almost 860 million in 2021<sup>17</sup>. In Asia, a deterioration in sufficient food consumption has been seen across a number of countries in the past three months from August to November. For example, in Myanmar, the insufficient food consumption rate has increased from 23% to 27%<sup>18</sup>.

World Vision estimates that in developing Asian countries, more deaths are being caused by hunger and malnutrition than by the virus itself. “The aftershocks of COVID-19 have the potential to exact a greater toll on the world than the virus itself. The pandemic has led to job losses and lower incomes and this is forcing millions of families to skip meals, go for cheaper, less nutritious food, or go without food altogether.” said World Vision International’s Global Humanitarian Director, Justin Byworth<sup>19</sup>.

<sup>15</sup> Gold, S. (2021). Low-income countries hit hardest by spike in global food prices. Devex.

<sup>16</sup> ADB. (2021). Key Indicators for Asia and the Pacific 2021. ADB

<sup>17</sup> Note: Live data as of 17 November 2021. Source: World Food Programme. (2021). HungerMap: Global insights and key trends. World Food Programme.

<sup>18</sup> World Food Programme. (2021). HungerMap: Asia and the Pacific insights and key trends. World Food Programme.

<sup>19</sup> World Vision. (2021). 40% global food price inflation forces the poorest families to work for eight days to afford basic daily food basket. World Vision.

## Inflation

Food prices have been climbing steadily in most Southeast Asian countries in recent years (Exhibit 3).

Inflation began rising pre-pandemic due to issues such as the African swine fever in China (which wiped out almost half of the world's pigs, sending pork prices to an all-time high in 2019); and the US-China trade dispute which introduced Chinese import tariffs on US pork and soybeans.

According to the IMF, inflation in Southeast Asia is projected at 2-3% p.a. from 2022-2026<sup>20</sup>. Singapore's core inflation is projected to increase further by 1-2% in 2022, largely driven by the expected food price rises<sup>21</sup>.

## Political issues and unrest

As we have seen before, factors such as rising food and energy prices, food shortages, and

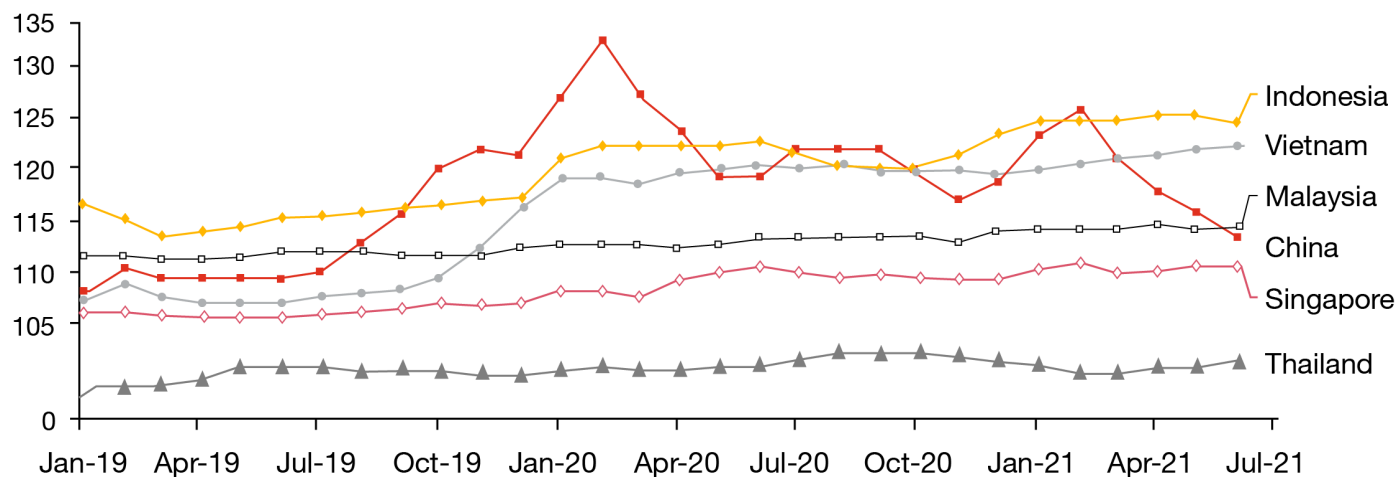
extreme weather can cause great social and political unrest amongst a country's people. Just a decade ago, surging food prices, along with many other factors, contributed to the unrest of the Arab Spring in 2010-11.

Joe Glauber, the International Food Policy Research's senior research fellow and former US Department of Agriculture's chief economist, has said that a core trigger for unrest was food insecurity. "It's the spark that lights the fire...the recent sharp increase in international food prices has already slowly started to feed into domestic consumer prices in some regions as retailers, unable to absorb the rising costs, are passing on the increases to consumers"<sup>22</sup>.

Arif Husain, the UN World Food Programme's chief economist warns that "hunger causes conflict, and conflict causes destabilisation, which opens the door to things like terrorism and feeds into forced displacement"<sup>23</sup>.

### Exhibit 3: Consumer Prices, Food Indices (2015 = 100)

Index, monthly, Jan 2019 – Jun 2021



Source: FAOSTAT

<sup>20</sup> IMF. (2021). Inflation rate, average consumer prices. IMF.

<sup>21</sup> Ang, J. (2021). Singapore inflation picks up in September as food, electricity and gas prices see sharper rise. The Straits Times.

<sup>22</sup> Terazono, E., Wheatley, J. (2021) Pandemic and higher food prices fuel sharp rise in global hunger. The Financial Times.

<sup>23</sup> Terazono, E., Wheatley, J. (2021) Pandemic and higher food prices fuel sharp rise in global hunger. The Financial Times.



# IV.

## A challenging business environment



### Significant volatility

Challenging market dynamics and frequent price fluctuations have had a knock-on impact on the financial performance of food businesses.

With the significant increase in the costs of raw materials, food producers have had to adjust their pricing to mitigate against losses and maintain profitability. FMCG companies such as Unilever and Kraft have been forced to raise prices in recent months, in order to account for raw material price hikes and labour shortages due to the pandemic<sup>24</sup>.

Unilever, which produces many household brands, including Bango (Indonesian soy sauce brand) and Sariwangi (Indonesian tea brand), has blamed the big jump in the price of commodities such as palm and soya bean oil as one of the main issues impacting financial performance. Unilever's CEO, Alan Jope, said it was "facing very material cost increases... crude oil price is now up 60%, palm oil is up 70%, soya bean oil is up 80%"<sup>25</sup>.

For food producers, rising prices for consumers becomes a necessity after exhausting other options, with Jope saying "our first reflex is to look for savings in our own business to offset these costs, but these are of a magnitude that will require us to continue to make some price increases"<sup>26</sup>.

However, whilst raising prices has helped businesses in recent months, it is not a sustainable strategy in the long-term. Businesses will need to explore other strategies to alleviate pressures.

<sup>24</sup> Sophia, D., Sebastian, A. (2021). Kraft Heinz rises core profit forecast helped by higher prices. Reuters.

<sup>25</sup> The Guardian. (2021). Unilever warns prices will rise due to surge in raw material costs. The Guardian.

<sup>26</sup> The Guardian. (2021). Unilever warns prices will rise due to surge in raw material costs. The Guardian.



## Supply chain issues

Supply chain issues are impacting profitability of food businesses as they attempt to manage additional costs.

Mondelēz, global snack giant, has seen supply chain challenges or labour and truck shortages directly impact Q3 performance, dampening growth. Whilst its adjusted gross profit increased US\$57 million at constant currency, adjusted gross profit margin decreased 160 basis points to 38.3%<sup>27</sup>. The outlook for 2022 remains similar, with Mondelēz's CFO Luca Zaramella expecting the issues of supply chain bottlenecks to continue "for the entire of 2022"<sup>28</sup>.

Other supply chain blockage factors such as the shortage in food packaging materials have also been delaying food business distribution.

McCormick, a US-based global seasoning business, had told its distributors in September 2021 that it had not received bottles for its gourmet spices line for several weeks, due to the closure of its supplier caused by COVID-19 related issues. According to McCormick, "The lack of bottles has impacted our production and is eroding our safety stock across the entire line", resulting in a dip in distribution volume by 30% versus what was previously forecast. McCormick has been negotiating with its customers to skip the holiday promotion to avoid further erosion of profitability.<sup>29</sup>

## Production and supply issues

Issues arising from the COVID-19 pandemic and increasing frequency of extreme weather events are causing further uncertainty around the robustness of existing business models and future food supply.

Food businesses across the value chain are looking to drive more fundamental change in the industry by investing in alternative methods for food production.

With extreme weather challenges impacting cocoa production, Cargill and vertical farming company AeroFarms have recently partnered to explore growing cocoa trees in controlled indoor environments, with the goal of producing higher yields and a more resilient production system. With over two thirds of the world's cocoa beans grown in just four West African nations, exploring controlled environment agriculture will allow Cargill to diversify its production outside of traditional countries, lessening the impact to future global supply chains<sup>30</sup>.

With only nine plant species<sup>31</sup> accounting for 66% of the world's total crop production, the biodiversity and resilience of supply chains has become an important focus for many agri-food businesses<sup>32</sup>.

The 'One Planet Business for Biodiversity' coalition, which includes members such as Nestle, Danone, Unilever and Symrise, was launched in 2019 with the mission of protecting and restoring biodiversity across their products and supply chains. These businesses aim to work with farmers and other stakeholders to drive systemic change across their value chains – primarily through regenerative agriculture practices, biodiverse product portfolios and protection of high value ecosystems<sup>33</sup>.

<sup>27</sup> Food Ingredients First. (2021). Mondelēz details labor shortage and factory strike impact in Q3 results. Food Ingredients First.

<sup>28</sup> DiPalma, B. (2021). Mondelez CFO: Don't expect relief from supply chain, inflation woes next year, either. Yahoo!news.

<sup>29</sup> Meyersohn, N. (2021). Grocery store shelves aren't going back to normal this year. CNN Business.

<sup>30</sup> Marston, J. (2021). Cargill & AeroFarms talk indoor cocoa production. AgFunder News.

<sup>31</sup> Note: The nine plant species consist of sugar cane, maize, rice, wheat, potatoes, soybeans, oil-palm fruit, sugar beet and cassava)

<sup>32</sup> FAO. (2019). The State of the World's Biodiversity for Food and Agriculture. FAO.

<sup>33</sup> One Planet Business for Biodiversity. (2019). Nineteen leading companies join forces to step up alternative farming practices and protect biodiversity, for the benefit of planet and people. Danone.



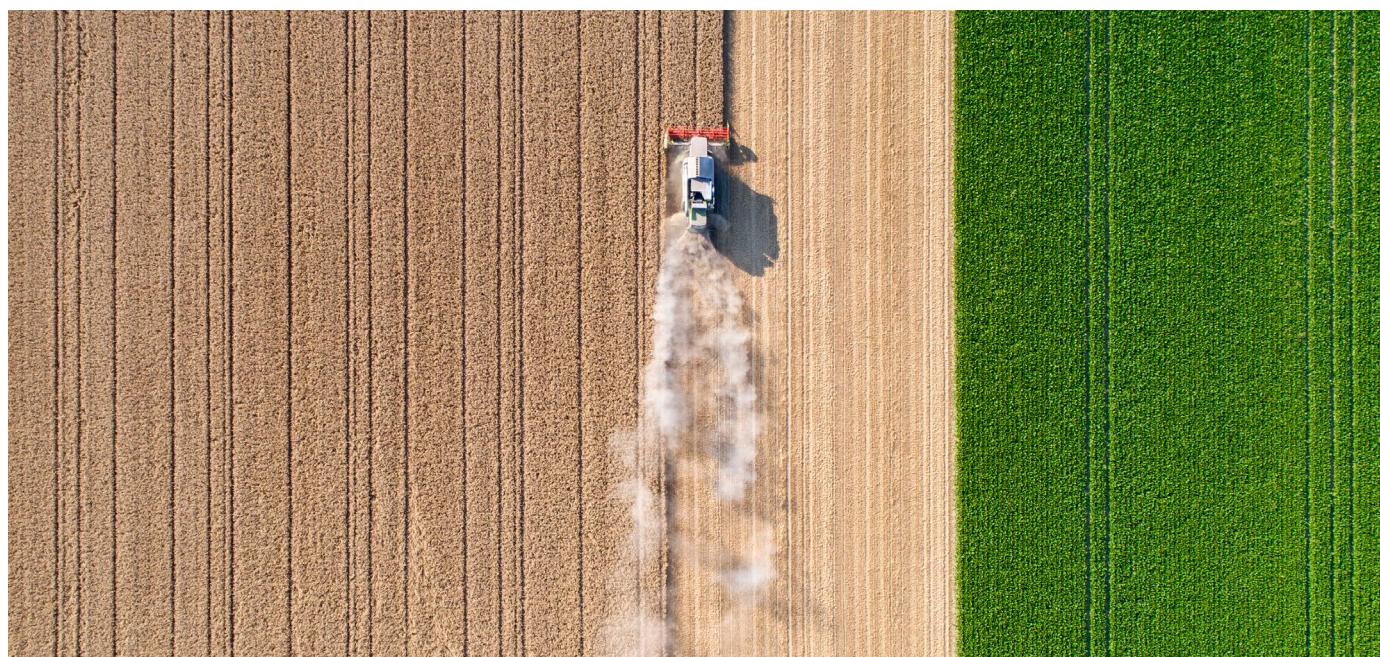
# V.

## Alleviating issues and driving value in the food industry

### Increased focus on new technologies

Whilst challenges arising from the pandemic may only be short-term, extreme weather-related events will become more severe and frequent in the coming years. According to the WEF, population growth and impending labour shortages in key regions means that food production must increase 60-70% in the next few decades<sup>34</sup>.

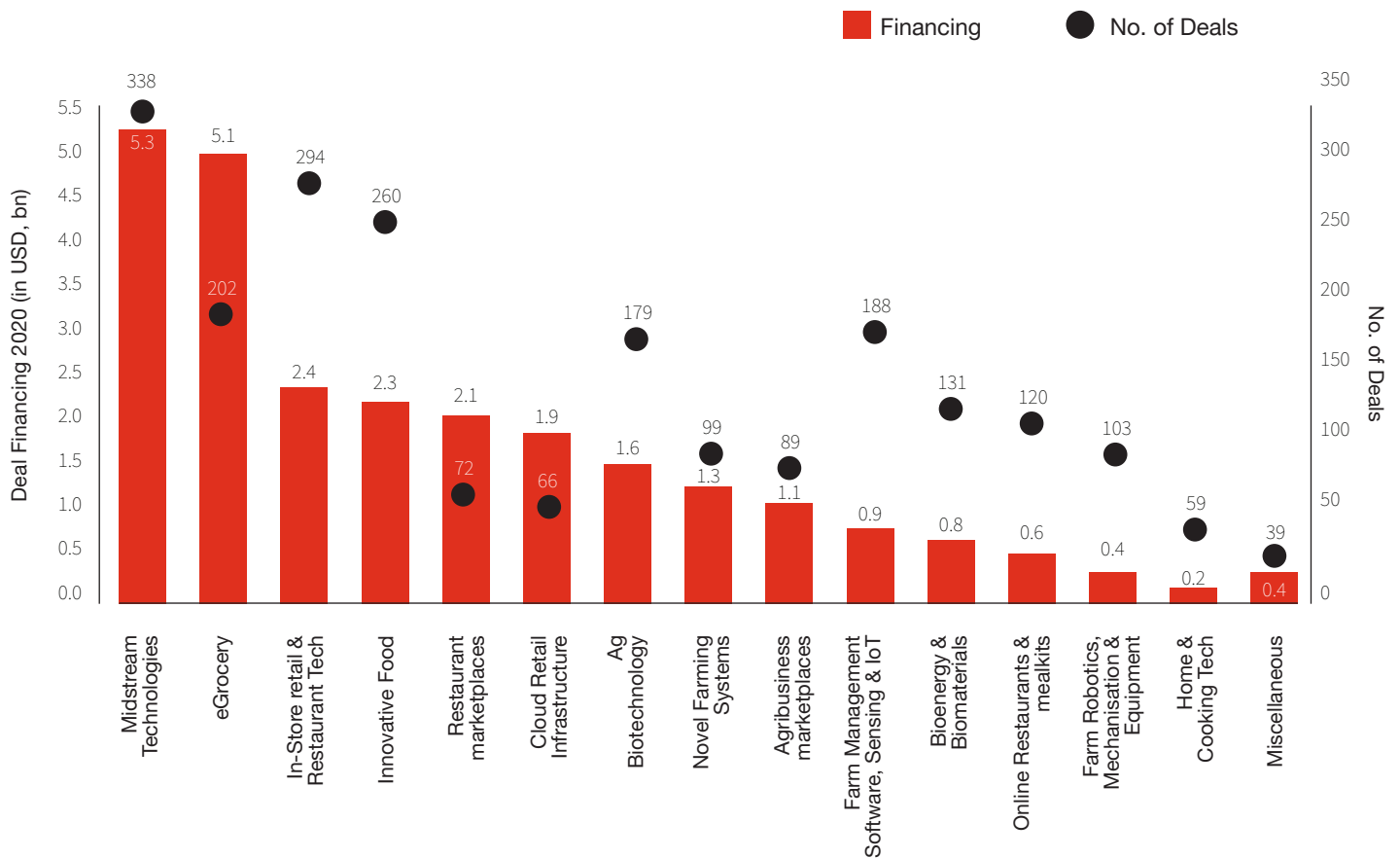
Such issues will require innovative solutions. In the last six years, global Agri-food-tech investment has grown to an estimated US\$30.5 billion in 2020, up from US\$6.4 billion in 2014<sup>35</sup>. Midstream technologies was the most popular category in both deal value and volume terms, attracting US\$5.3 billion in investments in 2020 (Exhibit 4). Other key investment areas driving food production included ag-biotechnology, novel farming systems, farm management software, IOT and robotics.



<sup>34</sup> Heard, J. (2021). Farmers need practical innovation, not moonshots, to stave off global food crisis. WEF.

<sup>35</sup> AgFunder. (2021). 2021 AgFunder AgriFoodTech Investment Report. AgFunder.

## Exhibit 4: 2021 AgFunder AgriFoodTech Investment Report – 2020 Deal Volume and Activity

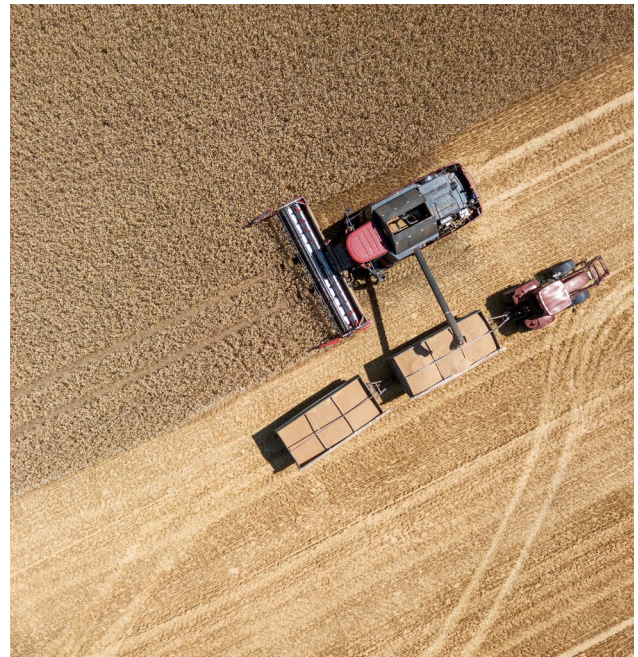


Source: 2021 AgFunder AgriFoodTech Investment Report.

For many agri-food businesses, this is leading to the development of exciting new innovations, both through internal product development and partnerships with emerging start-ups.

With COVID-19 exposing shortcomings in the global food supply chain, Cargill recently launched Splinter, a “blockchain-like” platform enabling parties to collaborate on logistics and minimise disputes. Erin Parkin, Cargill’s digital business lead told AFN, “COVID-19 has really highlighted the fact that there are a lot of inefficiencies in the food supply chain, in part because it’s all very point-to-point... what’s needed is a multi-party end-to-end solution”<sup>36</sup>.

Automation is increasingly being used to create operational efficiencies across the supply chain and mitigate against labour shortages and increased food demand.



<sup>36</sup> Pothering, J. (2021). Cargill open-sources Splinter, it’s ‘blockchain-like’ supply chain software. AgFunder News.



## Consolidation across the value chain

To react quicker to changing market conditions, and to have greater visibility over production and consumer demand, agri-food businesses are keen to increase control over their supply chain.

Through disintermediation, companies have greater ability to absorb fluctuating prices more readily. Given consumer prices are more stable than commodity prices, this can positively impact profitability. Having visibility of the full supply chain also provides enhanced transparency and decreases food safety concerns, not only for food businesses but also consumers.

Tyson Foods' venture capital arm recently invested in food automation solutions firm, Soft Robotics, which specialises in human-like hand-eye coordination technology in food processing. As a leading producer of chicken, beef, and pork, it is reported that Tyson Foods has invested \$500 million in automation and technology solutions in the last three years to improve worker safety and address labour shortages<sup>37</sup>.

Global agriculture business Syngenta has developed e-farmers Hub, a digital platform that provides greater visibility and flexibility across their farm network in Bangladesh, allowing them to access real-time data across multiple farms on a central platform. The tool also facilitates farm network management, allowing better communication of key messages such as alerts on market information and crop management advice<sup>38</sup>.

Other agribusinesses such as McCain are subscribing to emerging tools such as Cropln, a Bengaluru-based smart-tech SaaS start-up, that uses AI to provide farmers with real-time data to help them operate sustainably and maximise yields<sup>39</sup>.

Many food producers are in a race to shorten their supply chains, reducing the time taken to get newly harvested food directly to consumers. New online grocery models removing the middleman allow fresh produce to be picked “just in time” and only when required by the consumer, reducing both waste and transport emissions.

FreshToHome, an Indian grocery start-up, sources fresh fruits, vegetables, fish and meat from farms and fishermen, and delivers the produce directly to consumers, reducing the supply chain to just 24-36 hours<sup>40</sup>. Ninjacart enables restaurants, small stores, and retailers across India to buy fresh produce directly from farmers. Produce is delivered through a last-mile delivery network and reaches stores in less than 12 hours, bypassing costly cold chain infrastructure<sup>41</sup>.

Netatech, a Singapore-based start-up, has developed a small-scale vertical farm that can be quickly assembled against tower blocks, with automatic vending to the local residents on a subscription basis. This removes the need for cold chain and logistics, providing fresh vegetables in real time.

<sup>37</sup> Oller, S. (2021). Tyson invests in Ai-enabled robotics firm to boost worker productivity. Food Dive.

<sup>38</sup> Syngenta Foundation. E-Farmers' Hub (e-Hub). Syngenta.

<sup>39</sup> The Economic Times. (2019). SaaS-based agri-tech company Cropln registers 300% growth

<sup>40</sup> Singh, M. (2019). India's FreshToHome raises \$20M to grow its fish, meat, vegetable and milk e-commerce platform. TechCrunch; Mathur, N. (2020). FreshToHome raises \$121 million to expand in India, UAE. Mint

<sup>41</sup> The Economic Times. (2020). Flipkart, Walmart invest \$30 million in Ninjacart. The Economic Times; Nagarajan, T. (2021). How fresh is our food? The Hindu Business Line



## Increased diversification

Businesses are looking for alternative ways to hedge against market disruption. Diversifying offerings through broadening supply networks and expanding product ranges and customer footprint have enabled businesses to reduce their reliance on a single product or market, whilst exploring growth opportunities.

For agri-businesses, broadening supply networks is crucial in order to keep up with growing consumer demand and enable sustainable long-term growth.

Cargill recently entered into a joint venture with Continental Grain to acquire Sanderson Farms, expanding its poultry business offerings and capacity. The transaction could bring together 24 processing plants to specialise in poultry production and drive organic growth across the US market<sup>42</sup>.

Olam Food Ingredients (OFI) recently announced its plan to develop a new dairy processing facility in Tokoroa, New Zealand. The plant will become part of a global network spanning 20 major milk consumption markets such as Southeast Asia, China, the Middle East and Africa. “This facility will complement and enhance our ability to support our global customers and meet growing consumer demand for products that are natural, nutritious and delicious. It will also help address their innovation, traceability, and sustainable sourcing requirements as New Zealand’s farming standards and high-quality milk are very well regarded,” said Mr Sabri, Senior Vice President OFI Dairy<sup>43</sup>.

Expanding product ranges allows businesses to adapt to the everchanging needs of the consumer. With consumers demanding more

healthy and sustainable alternatives, additional investment will be required in product R&D.

Danone recently partnered with Brightseed, a “nutrient discovery” start-up, to further diversify its plant-based product range and prepare for its next stage of evolution. “Beyond the core of today [is] ‘plant-based 2.0’...The current landscape in beverage is based on an ingredient analog: almond, oat, soy. The opportunity we see is really the challenge of that convention”. Danone’s interim co-CEO Shane Grant shared of Danone’s new focus during the Q2 2021 financial results<sup>44</sup>.

Nestlé has also recently entered the cell-cultured meat market, partnering with Israeli start-up Future Meat. For Nestlé, expanding its alternative protein strategy will allow it to increase its offerings for vegan and vegetarian consumers. Nestlé believes that its focus on innovative and novel technologies “will help the company to continuously transform its portfolio with products that are good for people and the planet”<sup>45</sup>.

## Improved financial resilience

Improving a business’ financial resilience enables greater ability to withstand short-term market shocks – this can be achieved internally through strengthening balance sheets and better planning for disruption, or externally through capital injections from third party investors.

A number of financial investors have been actively investing in the agri- and food-tech space in recent years, with investment growing almost 400% between 2014 and 2020<sup>46</sup>.

In Southeast Asia, Temasek has been a prominent investor, investing over \$8 billion in agritech in the last decade<sup>47</sup>. Earlier this year,

<sup>42</sup> Cargill. (2021). Cargill and Continental Grain Company to Acquire Sanderson Farms for \$203 per Share in Cash and Create a Leading U.S. Poultry Company. Cargill

<sup>43</sup> Olam. (2021) Olam Food Ingredients details plans for commissioning of New Zealand dairy processing plant. Olam.

<sup>44</sup> Ellis, J. (2021). Danone partners with nutrient discovery startup Brightspeed amid ‘plant-based 2.0’ push. AgFunder News.

<sup>45</sup> Nestlé. (2021). Nestlé explores emerging technologies for cultured meat. Nestlé.

<sup>46</sup> AgFunder. (2021). 2021 AgFunder AgriFoodTech Investment Report. AgFunder.

<sup>47</sup> Gilchrist, K. (2021). Singapore’s Temasek invests millions into push for sustainable food start-ups. CNBC.





Temasek participated in a US\$300 million round for New York-based vertical farming start-up Bowery Farming. Bowery Farming has thrived during the pandemic, with its vegetables now available in over 850 grocery stores including global grocery chains. Other categories gaining traction include alternative proteins, with Temasek participating in both Growthwell Foods and NextGen funding rounds this year.

Temasek is just one of many investors that have been active across the agri-food sector. Others globally include the likes of S2G Ventures, AgFunder, Crowdcube, Innova Memphis and Horizons Ventures.

### Creating value for all stakeholders

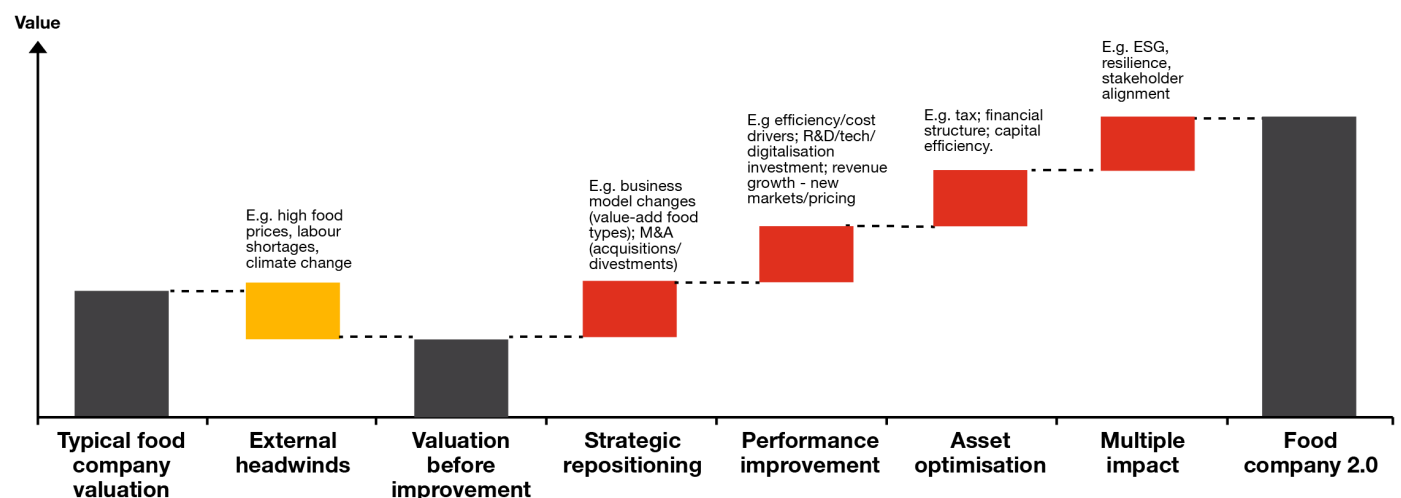
Overall, how food businesses preserve and create value<sup>48</sup> is critical in today's climate. Mitigating against external headwinds and regularly re-evaluating focus is where businesses can truly add value and ensure long-term success.

As we have seen throughout this report, fluctuating costs of doing business – rising commodity prices, labour shortages and climate change – continue to be a major risk. Businesses will need to take action to mitigate against these external headwinds and preserve value in the short to mid-term. Optimising operations (e.g. implementing automated technologies) could be one way to help tackle the current challenge of labour shortages and improve production yields.

To sustain growth and enable long-term success, businesses will need to continuously evolve. New growth opportunities can be created through strategically repositioning the business and implementing performance improvement initiatives.

Setting the strategic intent of a business will be a critical first step in deciding how best to reposition. Identifying M&A targets, or opportunities for divestments, will allow businesses to focus on developing the critical capabilities required for long-term success. Since the beginning of the pandemic, capability-driven

### Exhibit 5: Food company 2.0 – the high tech, sustainable future of food



Source: PwC analysis

<sup>48</sup> Note: value can be indicated by EBITDA, revenue, or absolute valuation. Some companies are moving onto other forms of “value” e.g. value to society

M&A transactions have been at the forefront of deal activity. Our [Doing the right deals: why capabilities are more important than ever for M&A](#) report looks at how businesses can maximise value in deals.

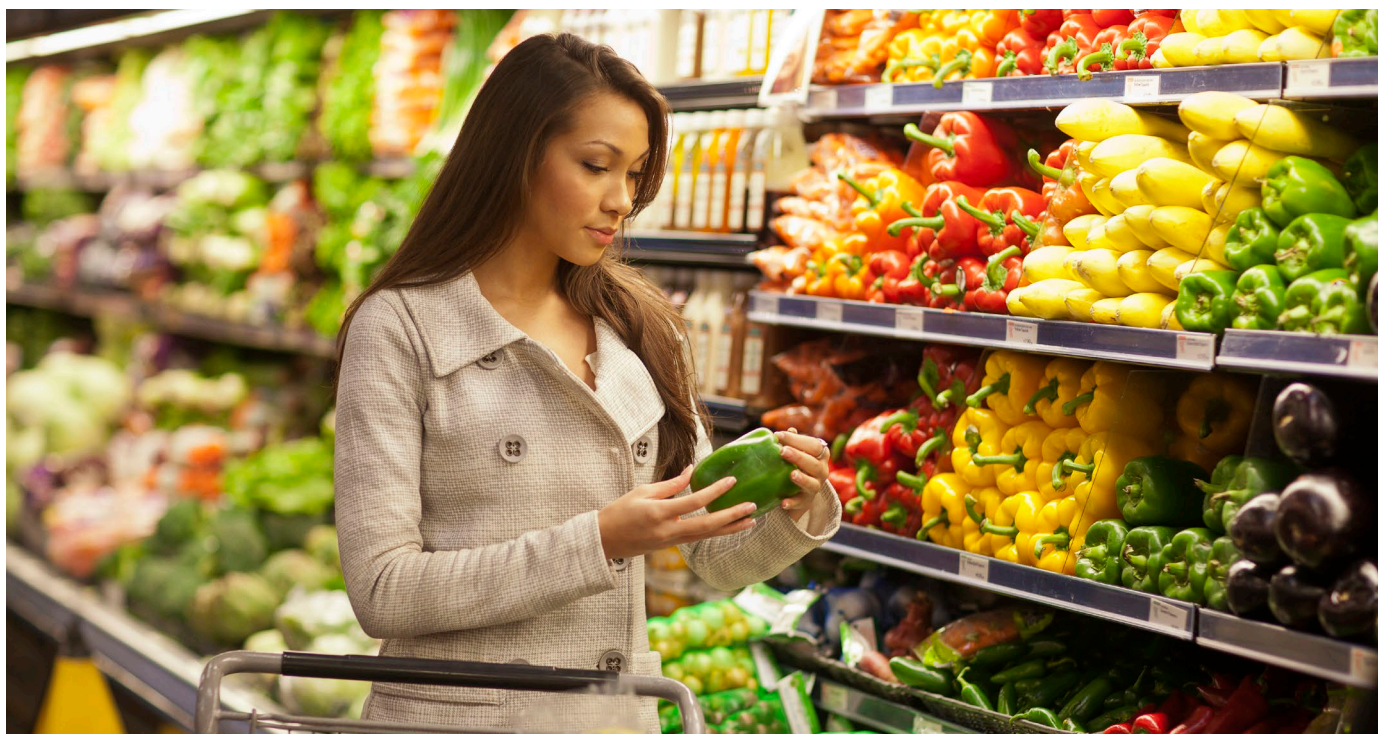
Other opportunities to reposition include optimising the existing portfolio or changing the overall business model (e.g. value-add food types). As we have seen earlier in this report, consolidating across the value chain could provide businesses greater control over their supply chain, and visibility over production and consumer demand.

Once the strategic direction has been set, businesses can focus on improving performance. For example, employing new technologies can help businesses take out costs and address climate change issues, through increasing the efficiency of operations and improving production yields. Our inaugural [Asia Food Challenge: Harvesting the Future](#) report highlights innovative ways that businesses, investors and governments can help to drive this forward.

Other initiatives involve growing the existing business through entering new markets and raising prices in a targeted manner, or pivoting the business to new, higher growth opportunities. Investing in product R&D (e.g. reformulation for healthier ingredients) and digital transformation (e.g. improving customer experience) will help businesses meet the ever-changing needs of consumers, and the increasing global demand for food. Our recently launched [Asia Food Challenge: Understanding the New Asian Consumer](#) report, highlights the changing behaviours of consumers as they look for more healthy, safe, convenient, and sustainable alternatives<sup>49</sup>.

As with all of these strategies, businesses will need to be aware of the wider implications of change that can both positively and negatively affect value. For example, there may be an opportunity for businesses to take advantage of tax, capital and balance sheet efficiencies.




Lastly, ensuring businesses meet increasing ESG (environmental, social, and environmental) expectations, align with stakeholder values, and build resiliency into their business models will be critical for long-term success. Not addressing such needs may have a negative impact on the value of food businesses.



<sup>49</sup> PwC, Temasek, Rabobank. (2021). The Asia Food Challenge: Understanding the New Asian Consumer.

There are various things businesses, investors and governments can do to help drive value creation across the sector. We have set out some key themes below.

### Exhibit 6: Five steps to create value for businesses, investors, and governments – key examples

 <b>Businesses</b>	 <b>Investors</b>	 <b>Governments</b>
<ul style="list-style-type: none"> <li>Mitigate against external headwinds through optimisation</li> </ul>	<ul style="list-style-type: none"> <li>Identify businesses that benefit from market disruption</li> </ul>	<ul style="list-style-type: none"> <li>Overall food security (e.g. increase local production / affordability of food for the domestic market)</li> </ul>
<ul style="list-style-type: none"> <li>Identify capability-driven M&amp;A targets / divestment opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Drive digitalisation of businesses (e.g. higher output, reduced costs)</li> </ul>	<ul style="list-style-type: none"> <li>Support and help build local food conglomerates with a trickle down investment in SMEs</li> </ul>
<ul style="list-style-type: none"> <li>Drive revenue of existing business (e.g. new markets; targeted pricing)</li> </ul>	<ul style="list-style-type: none"> <li>Promote ESG-related investments</li> </ul>	<ul style="list-style-type: none"> <li>Improve food safety frameworks</li> </ul>
<ul style="list-style-type: none"> <li>Invest in product R&amp;D / new tech (consider consumer needs e.g. healthy, sustainable food)</li> </ul>	<ul style="list-style-type: none"> <li>Follow consumer trends and requirements</li> </ul>	<ul style="list-style-type: none"> <li>Create an innovation-rich environment (e.g. grants)</li> </ul>
<ul style="list-style-type: none"> <li>Drive ESG-related opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen financial resilience of businesses</li> </ul>	<ul style="list-style-type: none"> <li>Encourage an open, international food ecosystem</li> </ul>

### PwC Strategy& approach to Value Creation

Our PwC Strategy& approach to helping businesses with value creation typically consists of four key steps: (1) performing a business diagnostic; (2) defining the winning aspiration; (3) identifying where to play; and (4) identifying how to win:

- 1. Business diagnostic:** The diagnostic step involves a full review of the business to understand how it is positioned in its market to identify areas of differentiation and weaknesses vs. peers. Key areas we examine include financial performance, operational and strategic capabilities, and benchmarking of competitors
- 2. Winning aspiration:** Defining the winning aspiration sets the scene for what the business wants to achieve. It involves deep discussions with leadership to solidify financial targets and broader strategic goals for the business

- 3. Where to play:** Identifying where to play allows the business to prioritise the most attractive and accessible opportunities to pursue. Market opportunities are reviewed across sectors and geographies, as well as key strategies around sustainability and digitalisation
- 4. How to win:** How to win involves identifying what is required by the business in order to achieve its new objectives. We provide a full review of internal and external capabilities required and how these might be built in-house, or obtained inorganically through M&A

Our Value Creation approach has achieved proven results with major international businesses. Please contact us if you would like to [find out more](#).

# Contact us

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